

REMARKS

The application has been amended to place the application in condition for allowance at the time of the next Official Action.

Claims 30-40 are pending in the application. Claim 40 is withdrawn from consideration as being directed to a non-elected species.

Claim 36 is amended as set forth in the Official Action to clarify that a single shift electrode functions as either a vertical shift register electrode or a horizontal shift register electrode to address the claim objection noted in the Official Action.

Claims 30-39 were rejected as unpatentable over applicant's disclosed prior art in view of HATANO et al. 6,143,585. That rejection is respectfully traversed.

It is well settled that to establish *prima facie* case of obviousness, three requirements must be met. First, the prior art relied upon must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. Second, the proposed modification must have had a reasonable expectation of success. Third, the prior art reference or a combination of references must teach or suggest all the limitations of the claims.

Based on the arguments set forth below, applicant asserts that *prima facie* obviousness has not been established.

As to the motivation to combine the references offered in the Official Action, the thicker insulating layer in the peripheral area of HATANO is over ion implantation region 305 (of Figure 4E) or 405 (of Figure 5D), not over peripheral electrodes.

Column 7, lines 13-17 of HATANO teach that after the thicker insulating layer 309 is formed, electrodes for transferring signal charges, an interlayer insulating film and other elements are formed to complete the device.

Thus, the electrodes of HATANO are formed after the thicker insulating layer is formed. HATANO does not teach or suggest forming an insulating layer over an upper surface of the peripheral electrodes. Accordingly, there is no motivation to form a thicker insulating layer over an upper surface of peripheral electrodes.

Moreover, the insulating layer 309, 406a of HATANO is formed on a planar surface. HATANO does not teach or suggest a second insulating layer covering peripheral electrodes and filling a gap (between adjacent electrodes). Thus, absent impermissible hindsight reasoning, there is no reasonable expectation of success that the planar insulating layer of HATANO would cover peripheral electrodes and fill the gap between adjacent electrodes.

Furthermore, in determining whether the references teach all the limitations of the claim, all words in the claim must be considered in judging the patentability of that claim

against the prior art. As set forth above, the thicker insulating layer of HATANO covers a planar area. The proposed combination of references fails to teach or suggest a second insulating layer covering peripheral electrodes and filling a gap, the second insulating layer having a thickness larger than a first thickness as recited.

Accordingly, even if one had been motivated to use a thicker layer on the peripheral area of applicant's disclosed prior art, such thicker layer would have been applied before the electrodes were formed. There is no motivation for forming a thicker insulating layer on electrodes. In addition, there is no reasonable expectation of success based on the teachings of the references. In any event, the proposed combination of references fails to teach all the limitations of the claims.

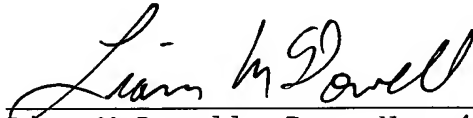
Therefore, *prima facie* obviousness has not been established. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing, it is believed that the present application is in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

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